

Theory of Knowledge Presentation Exemplar 3

Real Life Situation: Understanding the pricing of martial arts gear

Knowledge Question: How do we know that basic economic models are useful in everyday life?

This presentation is given by a group of two students

START (0'20"). The first member of the group outlines the real life situation in sportswear retailing where a pair of shorts costs as much as a gi yet the amount of fabric in the shorts is a very small in comparison. Therefore one might suppose that there are more resources used in the gi and therefore the price might be expected to reflect this. The actual pricing seems somewhat counterintuitive.

(1'43") The second member of the group then introduces the relevant model in this case: the law of demand – and shows how the interaction of supply and demand lead to an equilibrium price and quantity which reflect both the resources required to supply the good but also how much the good is demanded. This leads to an explicit statement of the knowledge question (4'24").

He then defines a model as a simplified representation of some aspect of the world. Models are used to describe, explain and make predictions. The construction of a model is described on a diagram that has a vertical line from top to bottom and the left hand panel is labelled 'real world' and the right hand panel 'model'. The process by which a model is constructed and then used to represent the real world is described as well as the manipulation of the model to arrive at results which are then interpreted in the real world. This picture is then applied to the real life situation.

A problem is identified which is that the demand curve for a good might be established as a survey where the respondents were asked "if the price were P how much of the good would you demand?" The point is made that it is one thing to answer the question in a survey but there is no guarantee that this behaviour would occur in real life. So such models might not be so useful for prediction.

(8'15") The first presenter examines the assumptions on which economics is based. He maintains that rationality is a strong assumption, perhaps too strong and in reality economic agents are far from the perfect maximisers of utility assumed by economic theory. They also do not have perfect information about price and other factors neither do they have identical stable preferences.

(10'42") The second presenter now starts a comparison with the natural sciences. Economic models often make the assumption of *ceteris paribus* which means that all other factors known as well as unknown are held to be the. In the natural sciences the analogy is that all factors except one are held constant in an experiment. Here enzyme experiments in biology are used to illustrate this idea. It is claimed that *ceteris paribus* makes economics more like a natural science because of this analogy. The presentation points out that despite this fact economics deals with human beings not with enzymes and human beings have a will, enzymes do not. So the analogy is limited.

(13'15") The first presenter now takes a critical view of *ceteris paribus*. It results in unrealistic statements about economic behaviour because economic activity depends on an amalgam of many changing factors not just one. If this assumption is dropped and more sophisticated assumptions are put in its place more realistic models result but these lose the power of simplicity leading to understanding. This is nicely presented. After all a model that makes no simplifying assumptions at all is not a model – it is real life.

(15'13") The second presenter now asks how legitimate it is for economics to make such abstract assumptions. He concludes that it is legitimate because such models help our understanding of real life. The concluding statement lacks clarity but the presenters seem to be saying that economic models give us some protection against our intuitions. They give us something on which to hang our understanding of economic behaviour even though they might not be very realistic, in the second presenter's words: "they give us something to go on".

This presentation fully meets the “typical characteristics” description given at level 3 of the presentation assessment instrument:

The presentation identifies a knowledge question that has *some connection* to a specified real life situation. The knowledge question is *explored* in the context of the real life situation, using *some adequate* arguments. There is *some awareness of the significance* of the outcomes of the analysis.

The “possible characteristics” at level 3 “relevant”, “adequate”, “acceptable” also seem apposite. The weakness of this presentation lies in the general clarity of the argumentation and the handling of the real life situation. The latter seems rather too thin to support a rich development. A rough guide for a fruitful real life situation is that it contains some element of controversy. The topic chosen here is more quirky and counterintuitive than a genuine controversy. It certainly gives rise to some useful theoretical exploration but the problems arise in referring this back to the real life situation. In this case the theoretical arguments go much further than the real life situation seems to warrant. A real life situation is more than just a prompt for some theoretical musings; there must be a clear link between the two. There must be a genuine question at the level of the real life situation that is answered by more abstract ToK thinking ‘below the line’.

The presentation does define a knowledge question which arises from the real life situation, albeit not a particularly strong one. The presenters clearly wanted to explore ways in which models can be useful to us in everyday life even if they do not provide accurate predictions. By tying the knowledge question specifically to economics the presenters have weakened it by making it too close to the real life situation and stifled the consideration of implications in related fields. In the same vein the use of the term ‘everyday life’ in the knowledge issue is confusing since this seems to refer to a type of description at the level of the real life situation rather than at the level of ToK analysis.

At this point it is assumed that the basic economic model of equilibria in efficient markets accounts for the observed prices. There is no attempt really to explore this. It begs the question somewhat since the model is assumed to be the explanation.

The knowledge question is explored and it is done primarily in the context of the real life situation although the exploration is not entirely sustained by the real life situation as indicated above. The arguments are adequate but no more. Although it is an interesting idea to compare the notion of *ceteris paribus* with the attempts by the natural sciences to isolate single controlled variables the presenters are not critical of this analogy. Firstly, there is not discussion about the fact that *ceteris paribus* is a tool for *describing* relationships not determining them. Secondly, there is no discussion about the problems faced by the natural sciences in actually carrying out the programme of isolating variables – that it requires knowledge of which variables are significant beforehand and also some variables (like time) cannot be isolated even in principle. A section that addressed either or both of these issues would have strengthened the presentation considerably.

Although much of the discussion implies more general conclusions valid in a context that is wider than the the real life situation considered in this presentation there is little acknowledgement of this. The presenters do hint that the use of a model as a framework on which to hang ideas and with which to structure thinking is widely used in economics.

These comments suggest that the level of sophistication of this presentation pushes it towards the upper boundary of level 3 so an appropriate score is 6/10.